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APPLICATION NO. FILING DATE		NG DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO		
09/929,680 08/14/2001		14/2001	Robert A. Adolph	24,0842	9076		
23718	7590	05/14/2003					
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200 GILLIN MD 200-9	GHAM LAN	NE ,	MORAN, TIMOTHY J				
SUGAR LAND, TX 77478				ART UNIT	PAPER NUMBER		
				2878			
				DATE MAILED: 05/14/2003	DATE MAILED: 05/14/2003		

Please find below and/or attached an Office communication concerning this application or proceeding.

Application No. Applicant(s)  Offic Action Summary  Examiner Timothy J. Moran 2878  AR Unit Timothy J. Moran 2878  AR Unit Timothy J. Moran 2878  AS HORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(s) FROM THE MALIKNO DATE OF THIS COMMUNICATION. Expensive of time may be valiable under the prosence of 3 CFR 1 136(s). In a event, breven, really a risiply file of set of St. (s)					W				
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Timothy J. Moran  2878  Period for Reply  A SHORTENEO STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  A SHORTENEO STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  If the period for reply specified above is feet then their (90) days, and provide the period for reply specified above is feet then their (90) days, and provide the set of the period for reply specified above is feet then their (90) days, and the set of the period for reply specified above is the standary ventered all specified and without the standary replaced all specified and specified all specified and period with specified and specified and specified and specified and specified and specified and the communication is the period for reply specified and the set of the communication is the specified and the set of the communication. Set 37 CFR 1.7940.  A specified and the specified and the specified and the communication is the specified and the communication. Set 37 CFR 1.7940.  Status  Status  Status  Sipposition of Claims  4 S Claim(s) 1.42 is/are pending in the application.  4a) Of the above claim (s)	-		09/929,680	ADOLPH, ROBERT A.					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address — Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  Editarison for many be series under the provisions of 5 CFR 1/38(a). Inno event, however, may a reply be timely filed of the communication.  Editarison for many be seried under the provisions of 5 CFR 1/38(a). Inno event, however, may a reply be timely filed after 50 (rg) 4/36(A) filed from the maning date of this communication.  Editarison for reply is specified to the series of 5 CFR 1/38(a). Inno event, however, may a reply be timely filed after 50 (rg) 4/36(A) filed from the maning date of this communication.  Fallow to reply within ne set for exhanced period of filed pay with by stabule, cause the septiciation to secone ABANDONED (30 U.S.C.§ 130.4) and you are set or exhanced period for reply with by stabule, cause the septiciation is communication.  Fallow to reply within ne set for exhanced period for reply with by stabule, cause the septiciation is communication.  Fallow to reply within ne set for exhanced period for reply with by stabule, cause the septiciation is communication.  Fallow to reply within ne set for exhanced for reply with by stabule, cause the septiciation is experient.  Application is FINAL.  2b) This action is FINAL.  2b) This action is non-final.  3l) Since this application is in condition for allowance except for formal matters, prosecution as to the ments is closed in accordance with the practice under Ex partie Quayle, 1936 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) Claim(s) 1.45 is/are pending in the application.  4) Claim(s) 3 is/are allowed.  Claim(s) 3 is/are allowed.  7) Claim(s) 3 is/are allowed.  7) Claim(s) 3 is/are objected to by the Examiner.  8) The drawing(s) filed on is/are rejected.  7) Claim(s) 3 is/are objected to by the Examiner.  10) The drawing(s) filed on is/are rejected to by the Examiner.  11) The proposed dra		Offic Action Summary	Examiner	Art Unit					
Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  Extensions of time may be available under the provisions of 3° CFR 1.136(a). In no even, however, may a reply be timely filled.  If the period for capty socialized above, the maximum statutory period will apply and will expire SIX ((s) MONT IST storn the mailing date of this communication. Failure to repeat with this patient of capty socialized above, the maximum statutory period will apply and will expire SIX ((s) MONT IST storn the mailing date of this communication. Failure to repeat the specified dozenous dates and the statutory of the specified provision of the specified provision of the specified provision. Set 7° CFR 1.754(c).  Status  10	·								
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## **DOCUMENT HANDLING ISSUES**

The papers filed on June 24, 2002 (certificate of mailing dated June 19, 2002) have not been made part of the permanent records of the United States Patent and Trademark Office (Office) for this application (37 CFR 1.52(a)) because of damage from the United States Postal Service irradiation process. The above-identified papers, however, were not so damaged as to preclude the USPTO from making a legible copy of such papers. Therefore, the Office has made a copy of these papers, substituted them for the originals in the file, and stamped that copy:

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If applicant wants to review the accuracy of the Office's copy of such papers, applicant may either inspect the application (37 CFR 1.14(d)) or may request a copy of the Office's records of such papers (i.e., a copy of the copy made by the Office) from the Office of Public Records for the fee specified in 37 CFR 1.19(b)(4). Please do **not** call the Technology Center's Customer Service Center to inquiry about the completeness or accuracy of Office's copy of the above-identified papers, as the Technology Center's Customer Service Center will **not** be able to provide this service.

If applicant does not consider the Office's copy of such papers to be accurate, applicant must provide a copy of the above-identified papers (except for any U.S. or foreign patent documents submitted with the above-identified papers) with a statement that such copy is a complete and accurate copy of the originally submitted documents. If applicant provides such a copy of the above-identified papers and statement within **THREE MONTHS** of the mail date of this Office action, the Office will add the original mailroom date and use the copy provided by applicant as the permanent Office record of the above-identified papers in place of the copy made by the Office. Otherwise, the Office's copy will be used as the permanent Office record of the above-identified papers (*i.e.*, the Office will use the copy of the above-identified papers made by the Office for examination and all other purposes). This three-month period is not extendable.

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### DETAILED ACTION

# Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 35 and 37-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Loomis, U. S. Patent No. Re. 36,012. Regarding claim 35, Loomis describes an instrument for detecting neutron phenomena comprising a neutron burst source (58, col. 6, lines 48-52, and col. 8, lines 49-53), a neutron detector (60, col. 6, lines 48-52) adapted to detect slowing down phenomena (col. 9, lines 20-23), and an inelastic gamma ray detector (66d, col. 8, lines 49-53), and a controller adapted to cause detection of capture cross section phenomena (col. 18, lines 48-52). Regarding the limitation "long duration neutron burst phenomena," Loomis does not describe the duration of the bursts, and is therefore understood to include long duration bursts.

Regarding claims 37 and 43, the instrument of Loomis is considered to include the use of repeated bursts.

Regarding claim 38, Loomis teaches the use of a monitor (col. 2, lines 51-57).

Regarding claims 39-42, optimization is considered inherent in the use of the instrument of Loomis.

Regarding claim 44-45, Loomis teaches the use of a thermal neutron detector and a gamma ray detector (see abstract).

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### Allowable Subject Matter

Claims 1-34 are allowed.

Claim 36 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Claim 1 includes the limitations that a method for measuring neutron interaction properties of an earth formation comprises irradiating with a plurality of short duration neutron bursts, detecting short duration neutron burst phenomena, and detecting long duration neutron burst phenomena. Claim 13 includes the limitations that a method for measuring neutron interaction properties of an earth formation comprises irradiating with a plurality of neutron bursts having a duration selected to enable detection of inelastic gamma ray phenomena, and detecting long duration neutron burst phenomena. Claim 23 includes the limitations that a method for logging earth formations comprises irradiating with a plurality of neutron bursts having a duration selected to enable detection of inelastic gamma ray phenomena, detecting inelastic gamma ray phenomena, and detecting long duration neutron burst phenomena. Claim 36 includes the limitations that the detection of background radiation is separated from the detection of capture cross section phenomena.

### Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wilson, U. S. Patent No. 6,207,953, describes an instrument for

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detecting neutron phenomena comprising a neutron burst source (20, col. 8, lines 24-

29), a neutron detector (18, col. 9, lines 18-21), and a gamma ray detector (14, col. 8,

lines 45-47).

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Timothy J. Moran whose telephone number is 703-305-

0849. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Porta can be reached on 703-308-4852. The fax phone numbers for

the organization where this application or proceeding is assigned are 703-872-9318 for

regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-308-

0956.

T.M.

TM

May 6, 2003

CONSTANTINE HANNAHER
PRIMARY EXAMINER
GROUP ART UNIT 2878

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